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FIG. 1

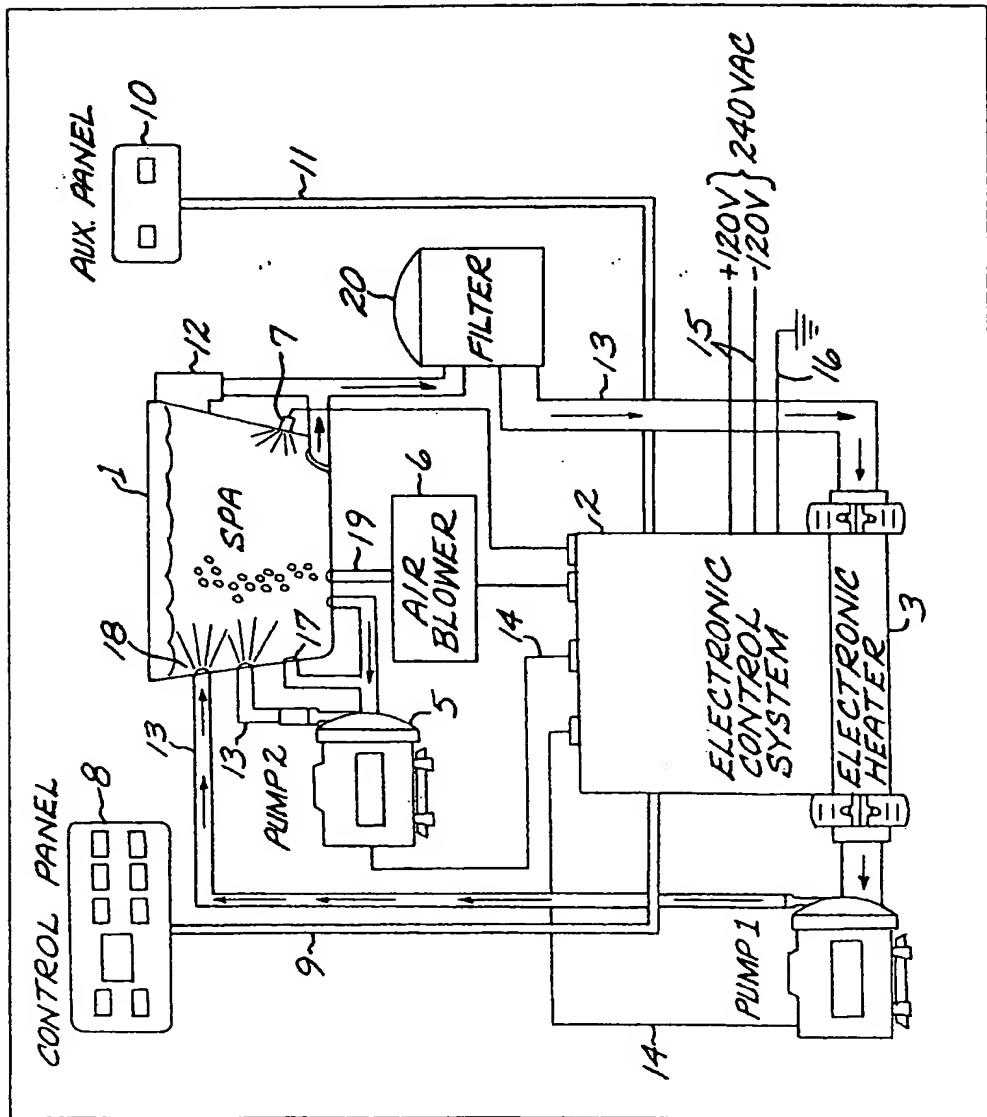
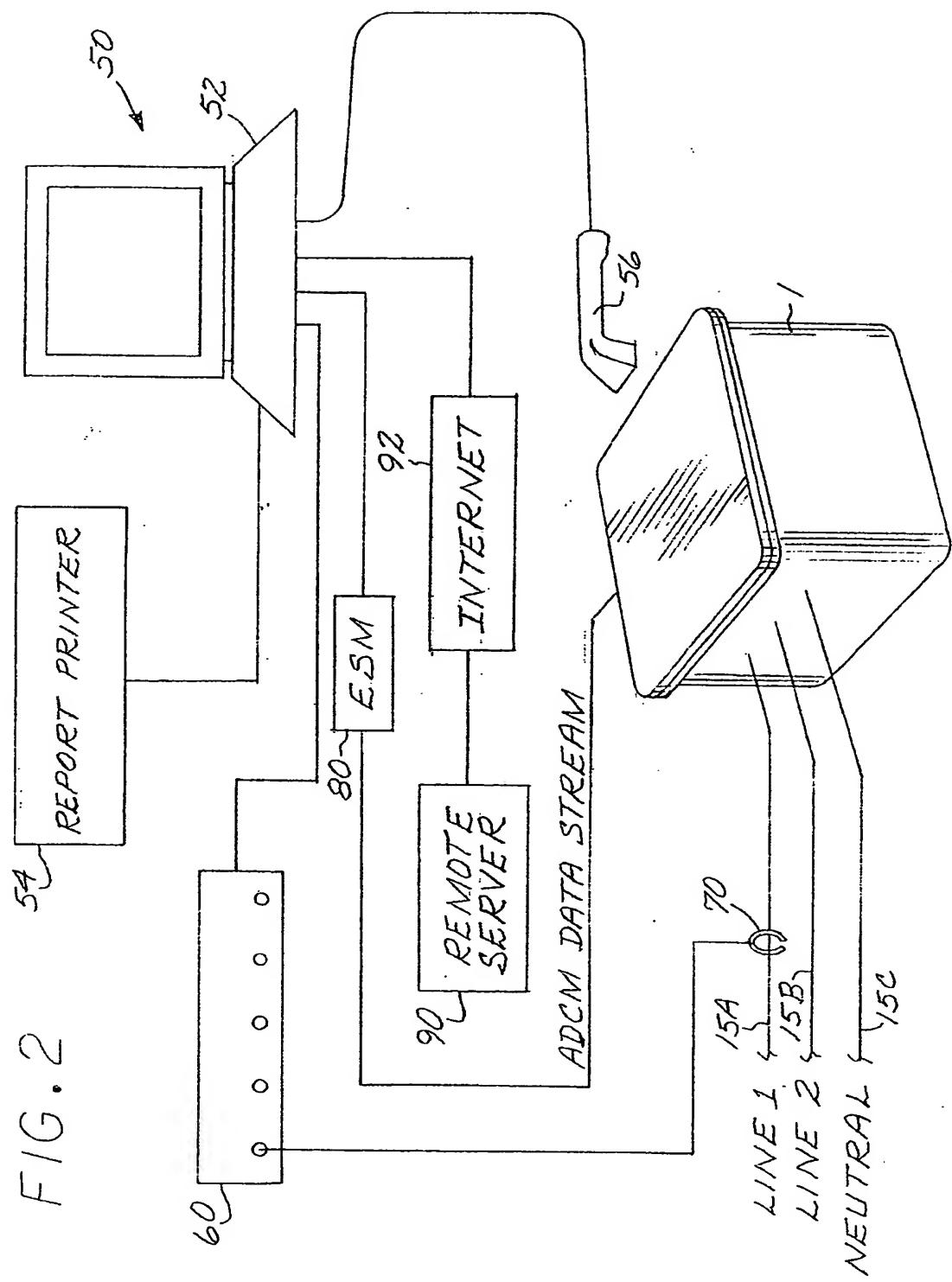


FIG. 2



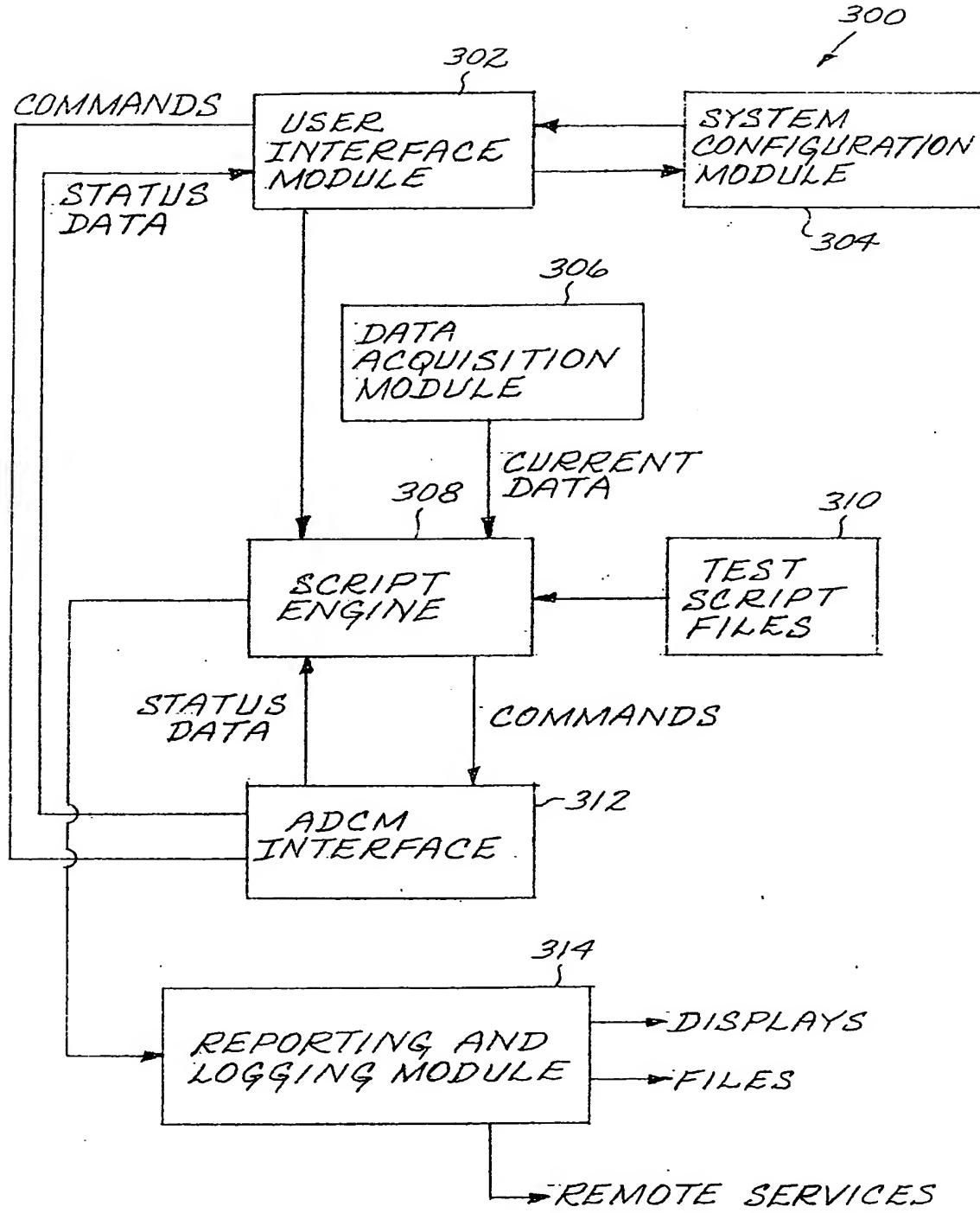


FIG.2A

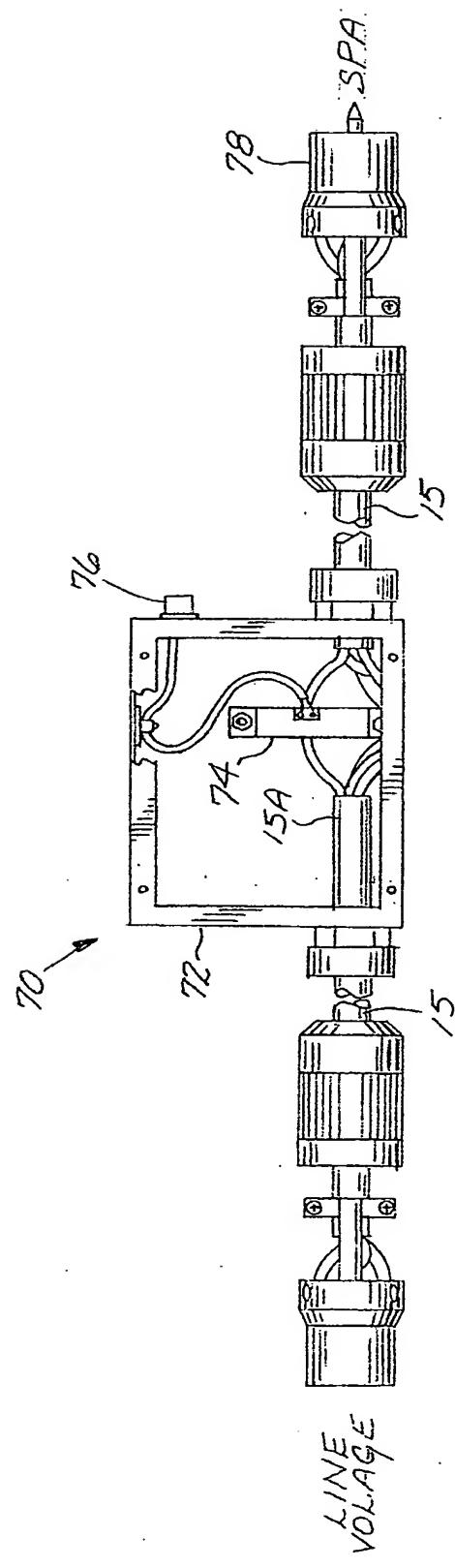


FIG. 3

FIG. 4

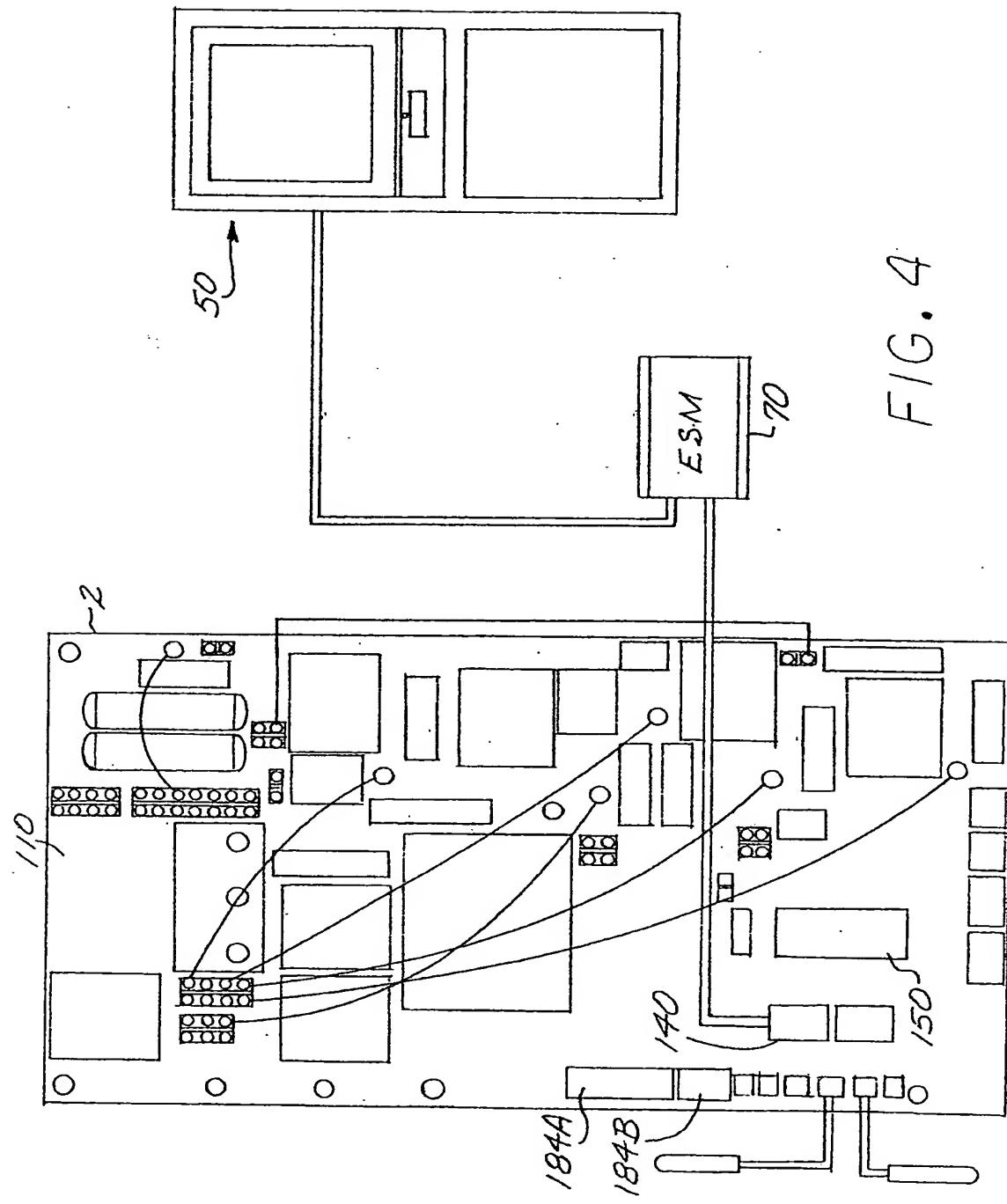


FIG. 5A

FIG. 5B

'B' DIP SWITCH SETTINGS

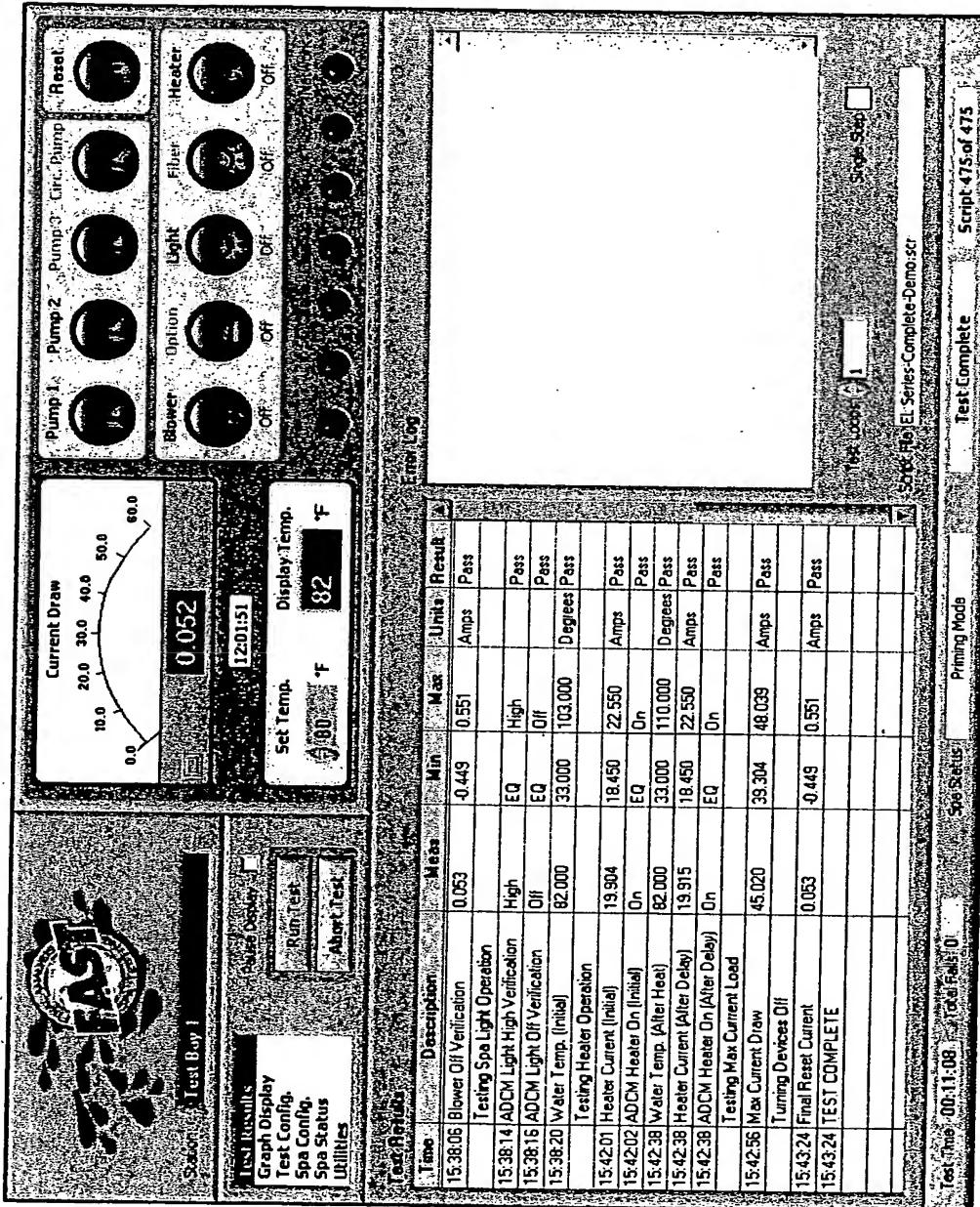
ON ↑ OFF	1	2	3	4	5	6	
OFF	ON	MODE	P-2 ISPD	P-2 ENABLE	BLOVER ENABLE	FQ. INSTEAD OF SPA LIGHT	PANEL BUTTON
OFF	ON	OFF	OFF	ON	ON	ON	N/A
OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
N/A	N/A	N/A	N/A	N/A	N/A	N/A	ASC/MACHINE

ALL UNUSED SWITCHES
SHOULD BE OFF.

'A' DIP SWITCH SETTINGS

	OFF	ON	MODE	TEST MODE	1	2	3	4	5	6	7	8	9	10	11	12
	OFF	ON	HIGH AMP.	AMPERAGE SELECT	1	2	3	4	5	6	7	8	9	10	11	12
LOW AMP.	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
FILTER PROG.	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
BY DURATION	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
TIME DISPLAY	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
IN 24HR	F°	C°	F°	C°	1	2	3	4	5	6	7	8	9	10	11	12
DEG F°/C°	15Min	30min	15Min	PUMP TIMEOUT	1	2	3	4	5	6	7	8	9	10	11	12
2HR	4HR	2HR	4HR	PI-L TIMEOUT	1	2	3	4	5	6	7	8	9	10	11	12
CLEANUP CYCLE	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
D3 SUPPRESSED	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
FOR 1 HR	SEE TABLE ABOVE	SEE TABLE ABOVE	SEE TABLE ABOVE	SEE TABLE ABOVE	1	2	3	4	5	6	7	8	9	10	11	12
CIRCPUMP BEHAVIOR	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
CIRCPUMP BEHAVIOR	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
CIRCPUMP BEHAVIOR	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
CRIG PI 1SPD	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
IN FLTR	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
PERSISTENT	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12
MEMORY RESET	OFF	ON	OFF	ON	1	2	3	4	5	6	7	8	9	10	11	12

FIG. 6



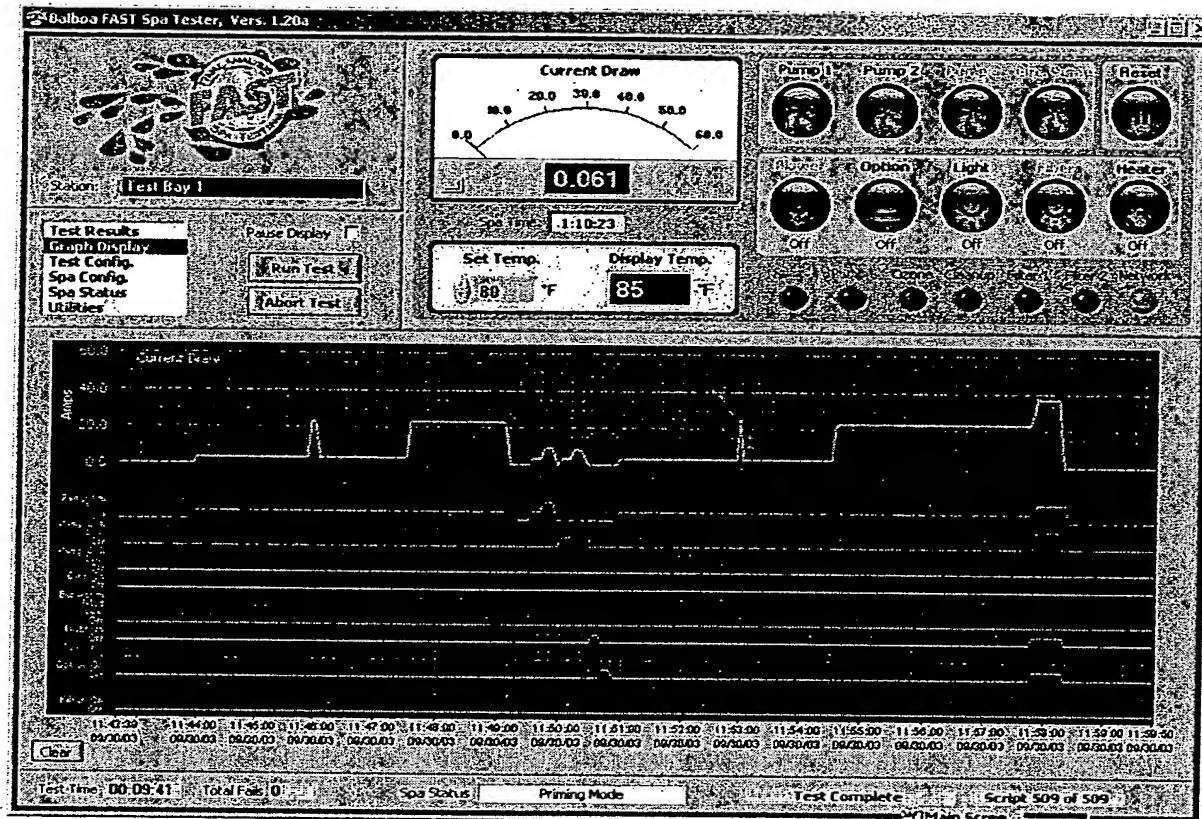


FIG. 7

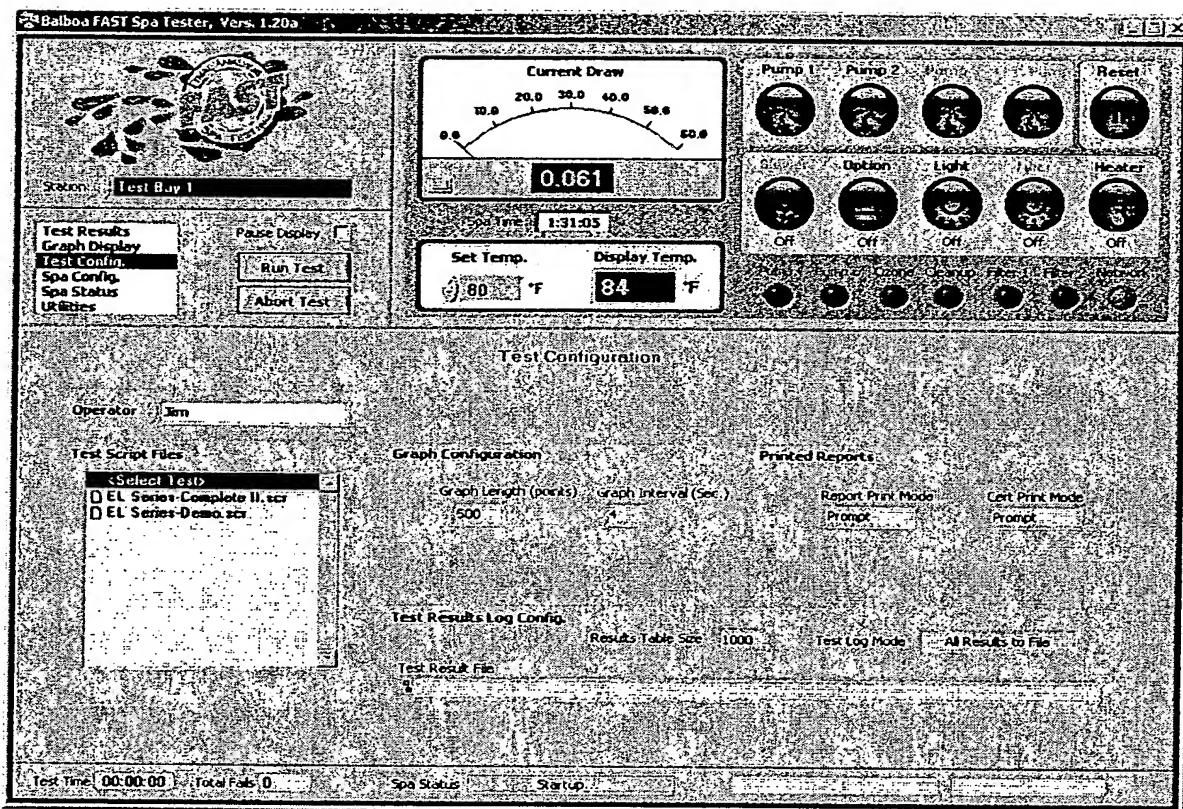


FIG. 8

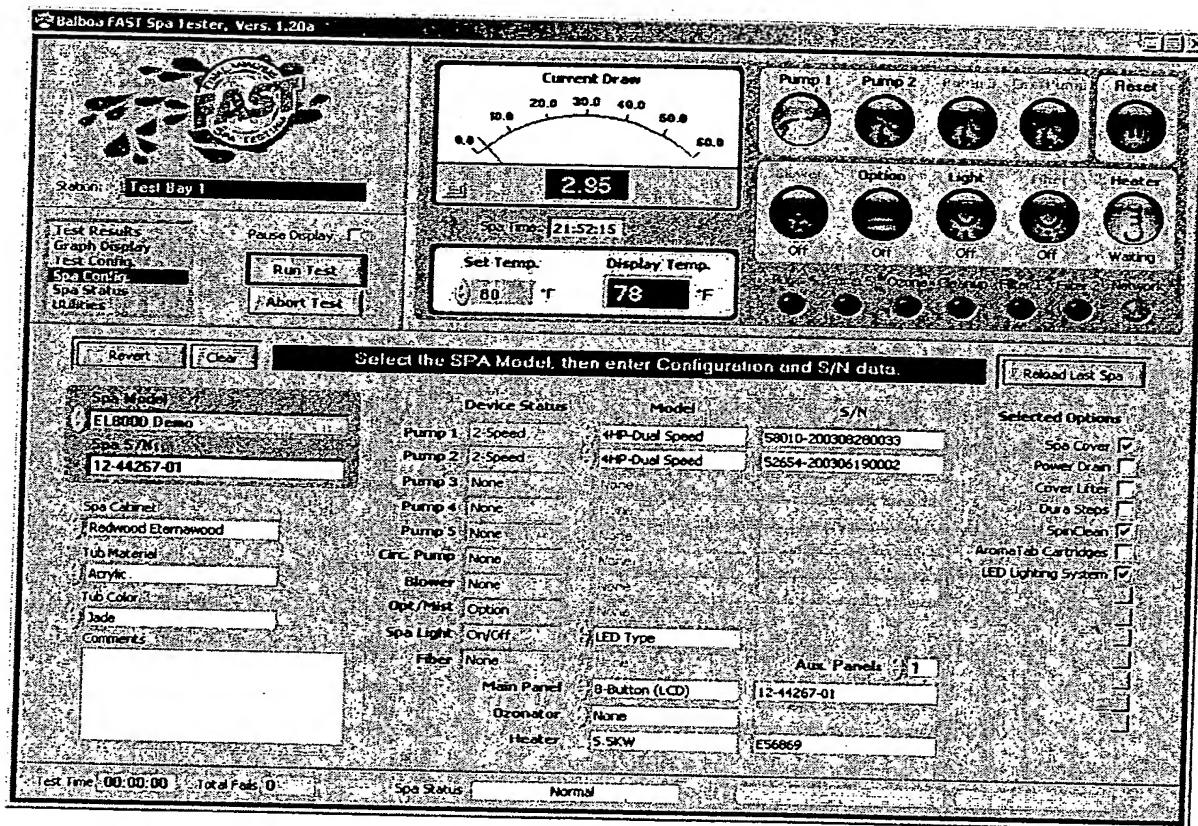


FIG. 9

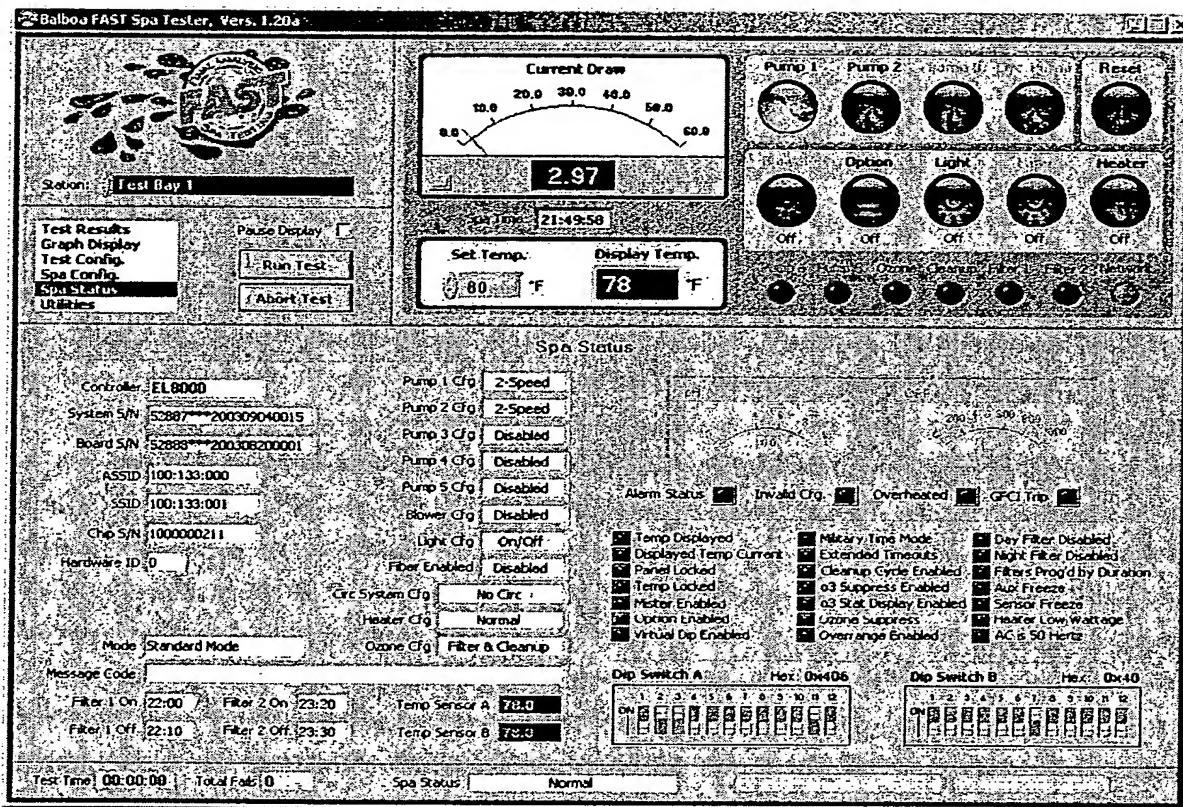


FIG. 10

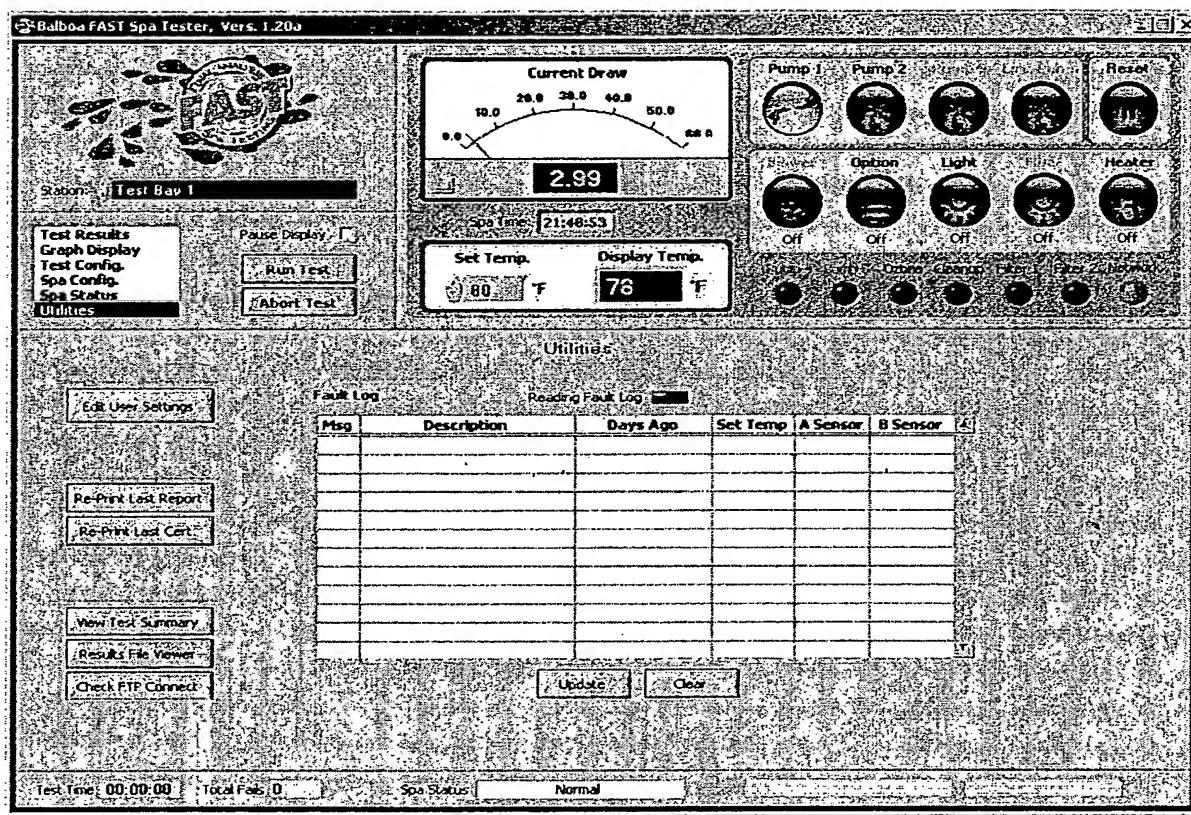


FIG. 11

Test Summary Viewer

Summary Log File: X:\C:\Copy of SnaTest\Tech Read & Summary Log.htm

Start Date:	05/02/03	End Date:	06/09/03	Today's Test Runs		Print Report	
Start Time:	00:00:00	End Time:	23:59:59	Selected Test Runs		Done	
				All Test Runs			
Total Runs:	153	Completed Runs:	172	Passed Units:	155	% Yield:	35.9
Date	Time	Sys Model	Sys S/N	Fails	Operator	Test Station	Test Completed
05/05/03	09:58:01			0	Operator1	Test Bay 1	Test Aborted
05/05/03	14:06:31			1	Operator1	Test Bay 1	Test Aborted
05/05/03	14:12:08		123456	3	Operator1	Test Bay 1	Test Complete
05/05/03	14:31:11		123456	1	Operator1	Test Bay 1	Test Aborted
05/06/03	12:11:03	Ultra 1000		0	Operator1	Test Bay 1	Test Complete
05/06/03	12:12:36	Ultra 1000		0	Operator1	Test Bay 1	Test Aborted
05/06/03	12:17:11	Ultra 1000		0	Operator1	Test Bay 1	Test Aborted
05/06/03	12:21:30	Ultra 1000		0	Operator1	Test Bay 1	Test Aborted
05/06/03	12:22:07	Ultra 1000		0	Operator1	Test Bay 1	Test Complete
05/06/03	12:24:04	Ultra 1000		0	Operator1	Test Bay 1	Test Complete
05/06/03	12:34:49	Ultra 1000		0	Operator1	Test Bay 1	Test Complete
05/06/03	12:37:31	Ultra 1000		0	Operator1	Test Bay 1	Test Complete
05/06/03	14:29:08			0	Operator1	Test Bay 1	Test Complete
05/06/03	14:33:09			0	Operator1	Test Bay 1	Test Aborted
05/06/03	14:50:53	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted
05/06/03	14:55:22	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted
05/06/03	14:57:02	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted
05/06/03	15:51:06	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted
05/06/03	15:53:08	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted
05/06/03	15:54:34	Ultra 5000		0	Operator1	Test Bay 1	Test Aborted

FIG. 11A

Test Result File Viewer						
Text Results File: C:\SpaTest\Test Results\Balboa_Ultra 5000_124453_Results.txt						
Pump 2 Type: 2-Speed						
Pump 3 Type: None						
Blower Type: 1-Speed						
Panel Type: ML500						
Num. Aux Panels: 1						
Pump 1 Model: BX4100						
Pump 2 Model: BX4101						
Pump 3 Model: None						
Blower Model: BX1002						
Ozonator: Balboa-240V						
Heater Model: 5KW						
Pump 1 S/N:						
Pump 2 S/N:						
Pump 3 S/N:						
Blower S/N:						
Ozonator S/N:						
Heater S/N:						
Spa Options: Dimmable Light Fiber Optics Waterfall Stereo						
Comments:						
TEST DATA						
16:50:39	First Set Of Instructions	Pass		Pass		
16:50:53	Pump 1 ADCM High Verification	Off	Not EQ	High	Fail	
16:51:01	Pump 2 ADCM High Verification	Off	Not EQ	High	Fail	
16:51:01	Pump 2 ADCM Off Verification	Off	EQ	Off	Pass	
16:51:05	Blower ADCM High Verification	Off	Not EQ	High	Fail	
16:51:06	Blower ADCM Off Verification	Off	EQ	Off	Pass	
16:51:10	Light ADCM High Verification	Off	Not EQ	High	Fail	

FIG. 11B

FAST Station Results

Result: **PASS**

Spa Model:	Ultra-2000	Exterior Color:	Grey	Test Station:	15
Serial Number:	0012345	Tub Material:	Red	Script File:	Demo0212-Nc System
Date Tested:	02/06/36 23:42:52	Tub Color:		Total Fails:	0
Time	Measurement	Min	Max	Result	
23:35:08	First Set Of Instructions	Pass		Pass	
23:35:08	*** Start of Test ***				
23:35:32	Pump 1 ADCM High Verification	High	EQ	High	Pass
23:35:51	Pump 2 ADCM High Verification	High	EQ	High	Pass
23:36:04	Pump 2 ADCM Off Verification	Off	EQ	Off	Pass
23:36:18	Blower ADCM High Verification	High	EQ	High	Pass
23:36:20	Blower ADCM Off Verification	Off	EQ	Off	Pass
23:36:28	Light ADCM High Verification	High	EQ	High	Pass
23:36:31	Light ADCM Off Verification	Off	EQ	Off	Pass
23:36:39	Fiber ADCM High Verification	Fiber+Wheel	EQ	Fiber+Wheel	Pass
23:36:49	Fiber ADCM Off Verification	Fiber	EQ	Fiber	Pass
23:36:56	Fiber ADCM Off Verification	Off	EQ	Off	Pass
23:36:56	Heater ADCM On Verification	On	EQ	On	Pass

FIG. 11C

FAST Station Results

Result: **FAIL**

Spa Model: Ultra-2000	Exterior Color: Grey	Test Station: 15
Serial Number: 0012345	Tub Material: Red	Script File: Demo0218.txt
Date Tested: 02/06/36 23:34:31	Tub Color:	Total Fails: 7

Time	Item Name	Measurement	Min	Max	Result
23:30:51	Dip Switch A check	8	EQ		6 Pass
23:30:51	Dip Switch B check	CE	EQ	CE Pass	
23:30:52	First Set Of Instructions	Pass			Pass
23:30:57	*** Start of Test ***				
23:31:31	Pump 1 High Current	0.000 Amps	11.320	13.310	Fail **
23:31:31	ADCM Pump 1 High Verification	High	EQ		High Pass
23:31:54	Pump 2 Low Current	0.000 Amps	3.000	4.000	2 Fail **
23:31:54	ADCM Pump 2 Low Verification	Low	EQ		Low Pass
23:32:19	Pump 2 High Current	0.000 Amps	7.000	9.000	Fail **
23:32:20	ADCM Pump 2 High Verification	High	EQ		High Pass
23:32:28	ADCM Pump 2 Off Verification	Off	EQ		Off Pass
23:32:48	Blower High Current	0.000 Amps	3.000	5.000	2 Fail **
23:32:48	ADCM Blower High Verification	High	EQ		High Pass
23:32:50	ADCM Blower Off Verification	Off	EQ		Off Pass
23:32:59	ADCM Light High Verification	High	EQ		High Pass
23:33:01	ADCM Light Off Verification	Off	EQ		Off Pass
23:33:11	Fiber-Wheel Current	0.000 Amps	1.000	1.800	2 Fail **
23:33:11	ADCM Fiber+Wheel Verification	Fiber+Wheel	EQ		Fiber+Wheel Pass
23:33:20	ADCM Fiber Only Verification	Fiber	EQ		Fiber Pass
23:33:29	ADCM Fiber Off Verification	Off	EQ		Off Pass
23:33:31	Heater Current	0.000 Amps	15.200	20.000	2 Fail **
23:33:32	ADCM Heater On Verification	On	EQ		On Pass
23:33:58	Water Temp @98	74.000 degrees	97.250	98.750	Fail **
23:34:26	TEST COMPLETE				

FIG. 11D

Pass Certificate

Certificate of Verification

Date Tested: Wed, Feb 06, 2036

Spa Information

Spa Model: Ultra-2000

Spa S/N: 0012345

Spa Features

Interior Color: Grey

Tub Material: Red

Tub Color:

Options: Ozone, Waterfall, Stereo, Television, Dimmable Light, pH/ORP Sensor, Mister, Fiber...

Pump 1: 2-Speed

Pump 2: 2-Speed

Blower: 1-Speed

We are proud of the trademark, outstanding quality, and the ultimate performance built into every Spa.

We hope you will enjoy your spa for many years to come.

Signed,

John L. Smith

John L. Smith: Director

FIG. 11E

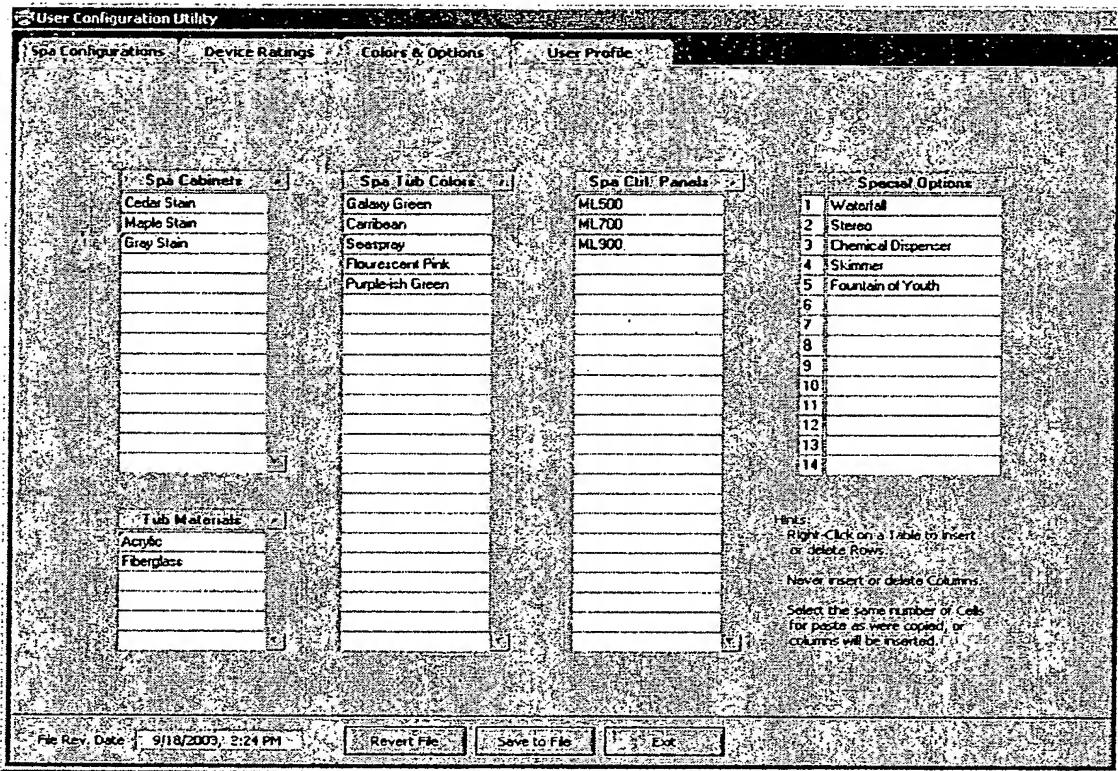


FIG. 11F

User Configuration Utility

Spa Configurations		Device Ratings		Colors & Options		User Profile	
Pump Ratings		Blower Ratings		Ozone/Mister Ratings			
Base Model	Amps	Low	High	Model	Amps	Options	Profile
BX4101	4.00	8.00		BX1002	2.50	5.00	8.00
BX4102	6.00	10.00		BX1004	4.50	8.00	11.00
BX4103	8.00	12.00		BX1006	6.50	9.00	13.00
Century	3.00	8.00		BX1008	7.50	10.00	14.00
Pump 4 Model	0.00	0.00		BX1010	8.50	12.00	14.00
Pump 5 Model	0.00	0.00		Mark	2.10	2.90	3.50
Important: 1. For single speed pumps, specify current in the High column, and set Low value to 0.0 2. For single speed blowers, specify High. For two-speed blowers specify High and Low currents							
Circ Pump Ratings		Heater Ratings		Ozone/Mister Ratings			
Circ Model	Amps	Heater Model	Amps	Options	Profile		
CIRC Pump 1	1.00	5.5KW	20.50	Baboo-120V	5.50		
CIRC Pump 2	2.50	4.0KW	16.80	Baboo-240V	7.50		
Century Circ	4.40			BrandX	11.50		
Fiber Ratings		Spa Light Ratings		Hints			
Fiber System	Fiber	+Wheel	Light Type	Low	Med.	High	
Bulb Type	0.00	0.00	Incandescent	0.05	0.10	0.20	Right Click on a Table to Insert or delete Row
LED Type	0.40	1.10	LED Type	0.03	0.09	0.15	Never Insert or delete Column
							select the same number of cells for paste as were copied, or columns will be inserted
File Rev. Date:	9/26/2003 1:57 PM	Report File	Save To File	Exit			

FIG. 11G

FIG. 11H

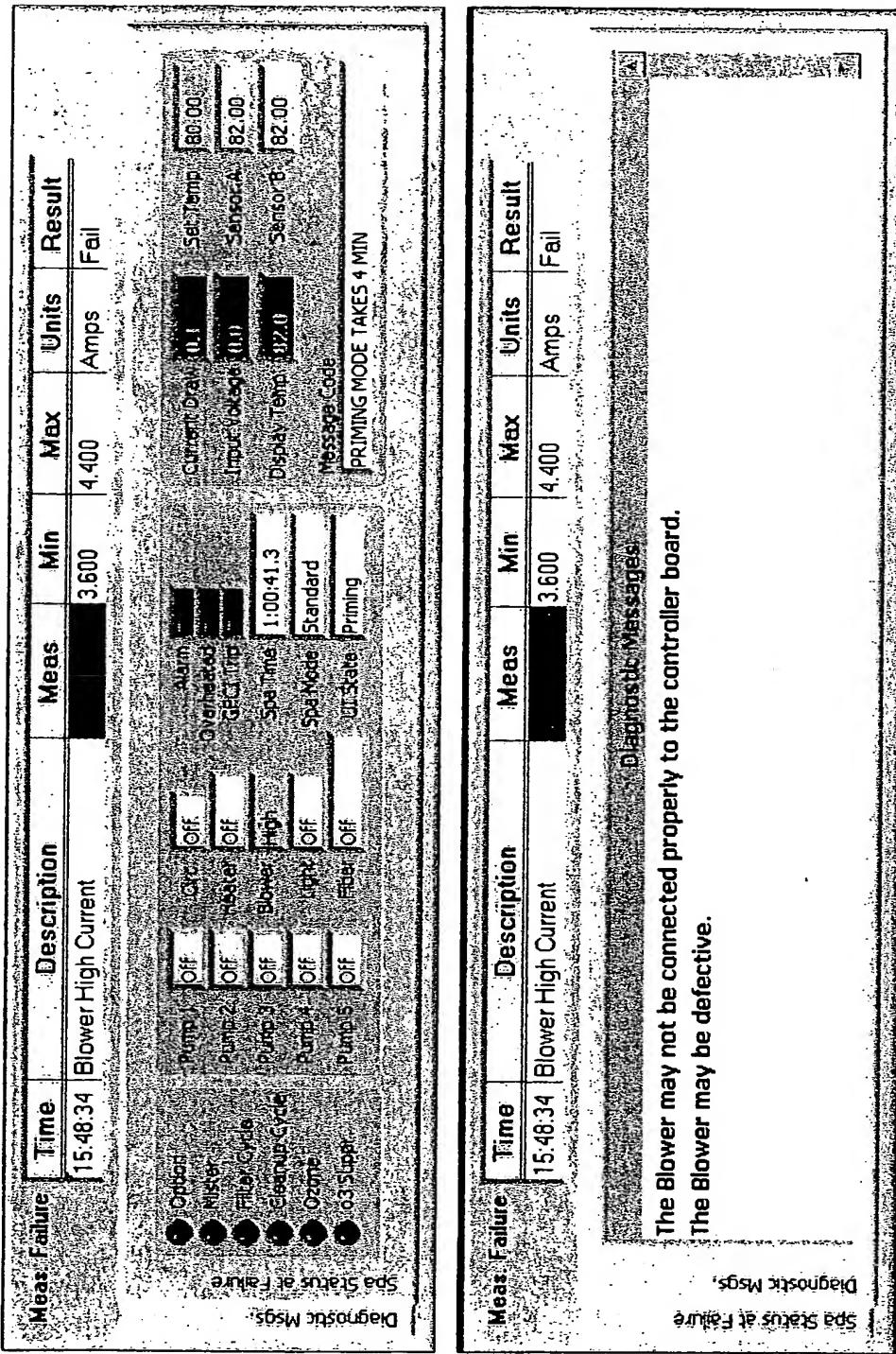


FIG. 12